



AMENDMENT

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In the claims:

Please cancel claims 7, 9, and 10 without prejudice.

Please enter amended claim 8.

8(amended). A process for cleaning a reactor comprising:
feeding a liquid solution that is a combination of an aqueous base and an organic solvent and comprises from 15 weight percent to 30 weight percent aqueous base and from 40 weight percent to 60 weight percent organic solvent, based on the total weight of the solution, and the remainder water to the reactor; and
emptying the reactor; wherein, the reactor is selected from the group consisting of a plate-frame heat exchanger, a plate-fin heat exchanger, and a spiral-plate heat exchanger.

REMARKS

In the above-identified Office Action the examiner rejected claims 7, 9, and 10 under 35 USC 102(a) as being anticipated by US Patent No. 5,782,989 to Rueter ("Rueter"). The examiner rejected claims 1, 2, and 4 under 35 USC 103(a) as being unpatentable over US Patent No. 3,985,572 to Petermann, et al. ("Petermann"). The examiner rejected claims 1, 3, 5, and 6 under 35 USC 103(a) as being unpatentable over Petermann in view of EP 248,681 to Komabashiri, et al. ("Komabashiri"). The examiner rejected claim 5 under 35 USC 103(a) as being unpatentable over Petermann in view of US Patent No. 5,145,597 to Rodriguez, et al. ("Rodriguez"). And the examiner rejected claim 8 under 35 USC 103(a) as being unpatentable over Rueter in view of Komabashiri.

Claims 1-6 are directed to a process including: feeding a liquid selected from the group consisting of water, a caustic solution, and a mixture of caustic and at least one organic solvent through multiple pressure sources to a reactor having an agitator with blades and stationary pressure sources aimed at the agitator blades; and emptying the reactor; wherein the agitator is rotated while the solution is fed to the reactor. Claim 8 is directed to a process for cleaning a reactor including: feeding a liquid solution that is a combination of an aqueous base and an organic solvent and comprises from 15 weight percent to 30 weight percent aqueous base and from 40 weight percent to 60 weight percent organic solvent, based on the total weight of the solution, and the remainder water to the reactor; and emptying the reactor; wherein, the reactor is selected from the group consisting of a plate-frame heat exchanger, a plate-fin heat exchanger, and a spiral-plate heat exchanger.

Claim 8 has been amended to include the elements of cancelled claim 7 from which it depends.

35 USC 102(b) REJECTION OF CLAIMS 7, 9, and 10

The examiner rejected claims 7, 9, and 10 under 35 USC 102(a) as being anticipated by Rueter. Applicants submit that the rejection is moot in view of the cancellation of claims 7, 9, and 10, without prejudice, herein.

35 USC 103(a) REJECTION OF CLAIMS 1, 2, and 4

The examiner rejected claims 1, 2, and 4 under 35 USC 103(a) as being unpatentable over US Patent No. 3,985,572 to Petermann, et al. ("Petermann"). The examiner points out certain disclosures within Petermann and concedes that Petermann does not disclose stationary pressure sources aimed at the agitator blades wherein the agitator is rotated while the solution is fed to the reactor. Nor does the examiner meet his burden of providing a prima facie case of obviousness by pointing out any teaching or suggestion within Petermann to modify the structure or method

of Petermann by changing the essential nature of his apparatus, i.e., rotating pressure sources and a stationary agitator. In fact, Petermann points out that his cleaning nozzles “.. are moved over the inner surface of the tanks along a complex predetermined path by means of a motor drive means which may be controlled by an electronic computer. This is important because the container tanks are often provided with baffles, agitator blades, and other obstructions inside such tanks ...Thus, the spray nozzles must move around such internal obstructions which requires a very complex motion of such nozzles that is accomplished by the computer in accordance with computer programs stored therein.” (Petermann, Col. 1, lines 30-43) (emphasis added). Applicants respectfully assert that the fair teaching of Peterman is that it is essential to provide exclusively movable nozzles and, indeed, the complex paths which they may need to traverse may need to be controlled by a computer rather than by the reactor operator. Petermann’s apparatus requires (Petermann, claim 1) “...automatic drive means for moving said stream forming means over the container surfaces along a predetermined path to scan said container surfaces with said liquid stream ..”. Petermann’s cleaning method requires (Petermann, claim 16) “...scanning said stream over said surface by moving said stream about a cleaning axis and longitudinally along said axis with a support means while maintaining said angle substantially constant ..”. The highly controlled movement of the cleaning stream and the structure to achieve that movement is the essence of Petermann’s invention. There is no motivation within Petermann to change Petermann’s structure or add stationary pressure sources to it or to expect success in so doing. The examiner appears to argue that simple reversal of the stationary and moving nature of the cleaning stream source and agitator is not patentable *per se*, but such a reversal in this case would leave an inventor with a complex cleaning stream structure (See Petermann figures) having no utility, thus destroying Petermann’s invention to extricate

elements of applicants' invention. Applicants respectfully submit that their method of claims 1, 2, and 4 is not obvious over Petermann.

Applicants respectfully request the examiner to withdraw his rejection of their method of claims 1, 2, and 4 under 35 USC 103(a) as being unpatentable over Petermann.

35 USC 103(b) REJECTION OF CLAIMS 1, 3, 5, and 6

The examiner rejected claims 1, 3, 5, and 6 under 35 USC 103(a) as being unpatentable over Petermann in view of Komabashiri. The examiner argues Petermann as above and submits that Komabashiri discloses polymerization reactor cleaning by contacting a reactor with certain cleaning solutions. Applicants respectfully submit that the deficiencies of Petermann as presented above stand and are not perfected by the teaching or suggestion of Komabashiri. Applicants respectfully submit that their method of claims 1, 3, 5, and 6 is not obvious over Petermann in view of Komabashiri because the combination does not teach or suggest their method as claimed.

Applicants respectfully request the examiner to withdraw his rejection of their method of claims 1, 3, 5, and 6 under 35 USC 103(a) as being unpatentable over Petermann in view of Komabashiri.

35 USC 103(b) REJECTION OF CLAIM 5

The examiner rejected claim 5 under 35 USC 103(a) as being unpatentable over Petermann in view of Rodriguez. The examiner argues Petermann as above and submits that Rodriguez discloses a polymerization reactor cleaning composition which contains an aqueous caustic solution. Applicants respectfully submit that the deficiencies of Petermann as presented above stand and are not perfected by the teaching or suggestion of Rodriguez. Applicants respectfully conclude that the method of their claim 5 is not obvious over Petermann in view of Rodriguez because the combination does not teach or suggest their method as claimed.

Applicants respectfully request the examiner to withdraw his rejection of their method of claim 5 under 35 USC 103(a) as being unpatentable over Petermann in view of Rodriguez.

35 USC 103(b) REJECTION OF CLAIM 8

The examiner rejected claim 8 under 35 USC 103(a) as being unpatentable over Rueter in view of Komabashiri. The examiner repeated his characterization of Rueter and stated that Komabashiri disclosed certain levels of aqueous base and organic solvent. The examiner stated that Rueter discloses a process for cleaning a reactor comprising feeding a solution selected from an aqueous base, an organic solvent of isopropanol and acetone, emptying the reactor; wherein the reactor is a heat exchanger. Applicants respectfully traverse. Rueter discloses a solvent system (Rueter, col.1, lines 8-13) useful as a cleaning solution; the system contains acetone and one or more organic solvents which are soluble in acetone, and, at most, a minor amount of a strong base (the composition may include) up to about 5% water which may be added dissolved in minor amounts of water, but there is no teaching or suggestion in Rueter of an aqueous cleaning composition nor motivation to use Komabashiri's cleaning solutions.

Further, Rueter does not teach or suggest a reactor which is a heat exchanger but rather a system which includes a "reactor per se, heat exchanger, etc" (col. 6, lines 19-20) and certainly does not provide motivation to use a reactor which is a plate-frame heat exchanger, a plate-fin heat exchanger, or a spiral-plate heat exchanger nor to solve the problem of cleaning such a reactor. Nor does Komabashiri provide motivation to use the heat exchanger reactors of applicants' method.

Applicants respectfully submit that the examiner has not met his burden of establishing a *prima facie* case of obviousness with his rejection of claim 8 for obviousness over Rueter in view of Komabashiri since he has provided no indication of the teaching, suggestion, or motivation within

either Rueter or Komabashiri to combine the two references in order to solve the problem faced by applicants. The examiner has identified elements of applicants' method within the references, but has not pointed to the reason for combining them. "Although a reference need not expressly teach that the disclosure contained therein should be combined with another, the showing of combinability, in whatever form, must nevertheless be "clear and particular"" *Winner International Royalty Corporation v. Wang*, 202 F.3d 1340 quoting *In re Dembiczak*, 175 F.3d at 999, 50 USPQ2d at 1617.

Applicants respectfully request the examiner to withdraw his rejection of their method of claim 8 under 35 USC 103(a) as being unpatentable over Rueter in view of Komabashiri.

Applicants respectfully request the examiner to consider applicants' amendment and remarks and to pass applicants' claims 1-6 and 8, as amended, to allowance at this time. Applicants' agent is available in order to expedite the allowance of this case at 215-641-7822 or by FAX at 215-641-7027.

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Date: November 20, 2002

Respectfully Submitted,



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Marked-up version of the claims to show changes made

8(amended). A [The] process [according to claim 7 wherein] for cleaning a reactor comprising:

feeding a liquid [the] solution that is a combination of an aqueous base and an organic solvent and comprises from 15 weight percent to 30 weight percent aqueous base and from 40 weight percent to 60 weight percent organic solvent, based on the total weight of the solution, and the remainder water to the reactor; and

emptying the reactor; wherein, the reactor is selected from the group consisting of a plate-frame heat exchanger, a plate-fin heat exchanger, and a spiral-plate heat exchanger.

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